

## **ABSTRACT**

A method and apparatus of diagnosing leakage in a fluid power system including a fluid supply line operatively connected to a plurality of valves which are connected to a plurality of actuators. Flow signals generated by a flow sensor disposed in the supply line are processed to obtain fluid consumption over time values and signals used to change the state of the plurality of valves are processed to determine a plurality of episodes. Each of the plurality of episodes corresponds to a pressurization of a particular branch of a particular actuator. The flow signals and the signals used to change the state of the valves are combined to calculate a change in air consumption value for each valve change of state. The change in air consumption values for each episode are compared to a predetermined reference value to determine any deviation corresponding to a particular one of the plurality of episode. The one of the plurality of episodes and corresponding pressurized branch with the greatest deviation is identified. A signal is generated indicating both that a leak is present in the system and the branch responsible for the leak.